

REAL ANALYTIC TORSION FORMS

Online seminar

Speaker: Jialin Zhu

Chongqing University of Technology

Time: Mon, Mar. 8th, 14:00-15:00

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Abstract: In 1995, Bismut and Lott defined a real analytic torsion form as the generalization of the Ray-Singer analytic torsion to the family case. For a smooth fibration with a flat complex vector bundle, they proved a smooth version of the Riemann-Roch-Grothendieck theorem, relating the characteristic classes of the flat bundle on the total space of the fibration to those of its direct image on the base manifold. They also improved the theorem to the level of differential forms, where the torsion forms appear naturally as the transgression forms.

In this talk we will give an introduction to the theory of Bismut-Lott torsion forms. We will also talk about our joint work with Martin Puchol and Yeping Zhang.